

**EVALUATION REPORT  
COLUMBIA PROJECT**

**PREPARED FOR**

***PALMETTO OF RICHLAND COUNTY, LLC***

***RICHLAND COUNTY  
SOUTH CAROLINA***

**JANUARY 9, 2013**

**JWA File No.: 120706**

**FINAL REPORT**



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## **SECTION ONE INTRODUCTION**

## 1.0 INTRODUCTION

### 1.1 GENERAL

Palmetto Utilities is a privately owned utility that has exclusive rights to provide wastewater service inside its defined service area. As a privately owned utility, the South Carolina Public Service Commission (SCPSC) has oversight of the utility. Palmetto Utilities has commissioned Joel E. Wood & Associates, L. L. C. to provide a valuation of a portion of the City of Columbia's wastewater collection system. A copy of a map showing the study area can be found in the Appendix of this Report.

### 1.2 PURPOSE AND SCOPE

The purpose of this valuation report (Report) is to determine the value of a portion of the City of Columbia's wastewater collection system as of October 30, 2012. The system valuation was accomplished by utilizing records and documentation furnished by Palmetto Utilities of the "As-Built" condition of the study area. To derive the opinion of value of the study area as of October 30, 2012, the personnel of Joel E. Wood & Associates, L.L.C. acquired background information available from Palmetto Utilities and the City of Columbia, obtained cost data from various sources and performed analysis of data. The methodology used to determine the value of the system can be found in Section 3 of this Report. The opinion of value of the study area prepared by Joel E. Wood & Associate, L. L. C. can be used in negotiating a fair market value for the assets contained within the study area.

## **SECTION TWO**

### **DESCRIPTION OF WASTEWATER FACILITIES**

## **2.0 DESCRIPTION OF WASTEWATER FACILITIES**

### **2.1 GENERAL**

Wastewater system is providing service to approximately 11,000 customers by a wastewater system comprised of a variety of components. A map showing the wastewater system within the "Study Area" can be found in the Appendix of this Report. The wastewater system is composed of individual service connections, gravity collection lines, gravity transmission lines, lift stations, and force mains.

### **2.2 WASTEWATER SERVICE CONNECTION**

The beginning of the wastewater system is at the individual service connection. The individual service connections are constructed of PVC sewer pipe beginning at the customer's facilities and extending to the road right-of-way or to a utility easement owned by the City of Columbia. It is the responsibility of the customer to maintain the portion of line from their point of use to an interface with the City of Columbia. The portion of the service connection maintained by the City of Columbia is that portion of line from the beginning of the road or utility easement to the point of connection with City of Columbia's collection lines. The sewer service line is either a 4" PVC or Vitrified Clay (VC) sewer pipe line or a 6" PVC or VC sewer pipe line, and the average age of the service lines is approximately fifteen (15) years old.

- 2.3 The City of Columbia's gravity collection system and transmission lines are located within easements and rights-of-way dedicated to the City of Columbia and if Palmetto Utilities acquires the lines in the Study Area those easements and rights-of-way will be transferred to Palmetto Utilities. The collection system conveys wastewater gathered from the individual service connections to the larger trunk lines. The gravity collection system is comprised of 8" PVC, 8" VC and 8" ductile iron pipe line and the transmission system is composed of 10" to 27" PVC, VC, and ductile iron gravity sewer. There is approximately 648,200 linear feet of 8" gravity collection line. The gravity collection system is designed to take advantage of the natural contours of the service area. The collection system begins at the upper elevations of the service area and travels down slope to connect with the transmission lines or lift stations. There is approximately 147,800 linear feet of transmission lines ranging in size from 10" diameter pipeline to 27" diameter pipeline. There are approximately 3939 manholes located within the collection and transmission system. The average age of the collection and transmission system is estimated to be ten years, which is a relatively new system when compared to the expected life of a gravity collection and transmissions system projected to be 100 years. The depths of the collection and transmission lines rarely exceed twelve feet of depth. The majority of the manholes are constructed of precast concrete with cast iron rims and covers. The scope of this report did not include a detailed inspection of the manholes to

determine their accessibility and condition. Also, an in depth infiltration and inflow (I/I) analysis was not conducted. A study should be conducted to determine if there is an I/I problem because this can impact the value of the system. The condition of the collection and transmission lines was not determined in the field but for the purposes of this valuation it is assumed that the collection and transmission system is in good condition. If, during the course of investigation by Palmetto Utilities, it is found that the condition of the infrastructure is substandard, Joel E. Wood & Associates should be contacted and the valuation of the system revised to adjust for problems discovered within they system. As the system ages, I/I should be monitored and a program imitated that would include pressure cleaning 10 % of the system annually, conducting camera inspections, and making repairs to problem areas found as a result of the cleaning and inspections.

- 2.4 Following collection of the wastewater by the gravity and transmission mains, the wastewater flows directly to the treatment facility or to lift stations. Flows into the lift stations are pumped to transmission lines that flow by gravity to the treatment facility or by force main directly to the treatment facility. There are a total of twelve (12) lift stations in the Study Area at the time of this report. Information on the lift stations was provided by Palmetto Utilities and JEW A did not make any field visits to determine the condition of the lift stations. A list of the lift stations can be found in the Appendix of this report. The lift stations are duplex stations which range in size from seven and one-half horsepower to seventy-five horsepower. It is estimated that the average age of the lift stations is nine years with an average service life of twenty years for the pumps and rails. All of the lift stations are located within easements or on property controlled by the City of Columbia. The lift stations can be accessed by service vehicles and for the purpose of this Report are assumed to be in good condition. All lift stations do not have an on site emergency generator to supply power in the event of a power outage. It is assumed that portable generators are available to provide emergency power but it is recommended that a generator be provided at each lift station site.
- 2.5 When collected wastewater enters the lift station, it is then pumped and transferred to other transmission lines or travels directly to the wastewater treatment facility via a system of force mains. The force main system is comprised of approximately 20,800 linear feet of force main ranging in size from 2 1/2" diameter to 12" diameter. The force main is constructed of PVC or ductile iron and the force main has an average age of approximately twelve years with the maximum expected life being one hundred years.

### **SECTION THREE VALUATION METHODS**

### 3.0 VALUATION METHODS

#### 3.1 GENERAL

The objective of this analysis is to establish an opinion of the “fair market value” of the wastewater collection system within the Study Area. Fair market value assumes that both the buyer and the seller are aware of all relevant information and that neither party is under the compulsion to act. There are three approaches utilized to provide a basis for an opinion of value of an existing utility system. The three approaches are:

- (i) the reproduction cost new less depreciation approach;
- (ii) the income approach; and
- (iii) the comparable sales approach.

These approaches analyze various aspects of the system, including the physical conditions of the existing system; the cash flows anticipated to be generated by the utility in the future; and finally, the transaction factors related to the acquisition of similar utilities in the past. Even though none of these methods may be considered ideal on a stand-alone basis since each evaluates a particular facet of the utility, the consideration of all three provides a range for determining the value of the utility system based on numerous relevant factors. The remainder of this section provides a general description of the valuation approaches utilized for the Report.

#### 3.2 REPRODUCTION COST NEW LESS DEPRECIATION APPROACH

The reproduction cost new less depreciation (RCNLD) approach is commonly utilized in the determination of estimated value in utilities and has been accepted in litigation cases involving the acquisition of utilities throughout the United States. The primary reason for this is the fact that most utilities are comprised of complex treatment, pumping and piping networks which all have various service lives and different years of installation. In order to address these technically complex facilities, the RCNLD approach has been developed.

The RCNLD approach determines a cost for each part of the system as it would be necessary to reproduce it at a specific point in time. In many cases, due to the circumstances of historical needs and decisions, the parts used for the present function would not normally be installed today. Therefore, the RCNLD approach includes facilities, systems, configuration, sizing and equipment which are either 1) more than needed and may be underutilized; 2) only partially functional; 3) less than needed; or 4) are not reflective of a typical system of the present capacity. The RCNLD approach estimates values for the system components with unit pricing at the date of valuation as a single construction project. The general concept of this approach contemplates that the property would be constructed as a

whole, in one continuous effort by a General Contractor acting for an Owner under the supervision of its representatives.

The RCNLD approach considers the estimated remaining useful life for particular system assets which are in service. Additionally, this approach recognizes adjustments to the initial calculated useful life value by subtracting the value of replacing substandard assets or assets which will be retired before their normal assumed service life and the addition of values for assets which are anticipated to be in service longer than their normal assumed service life. Finally, the current assets and/or liabilities are included, as applicable, to account for the financial assets or liabilities to remain with the utility.

The RCNLD analysis is based upon the following assumptions:

1. All utility physical assets are designed, permitted and constructed in one continuous effort.
2. The construction activities are assumed to follow the same historical sequence as that followed in the Palmetto Utilities service area. For example, gravity collection mains, force mains and manholes were assumed to be constructed before or simultaneously with the roads and driveways.
3. The general contractors, acting for the utility and under its supervision, utilize current construction practices and procedures to reproduce the property in such manner as to achieve all efficiencies that these procedures and practices would allow.
4. The unit prices include the cost of all labor and material directly related to specific items and the use of construction equipment. They also include all material costs, installation costs, and construction management costs.
5. The unit costs include an allowance for indirect costs which are not specifically and directly identifiable with any distinct unit of property. These costs include field supervisors, inspection and testing of materials, and allowances for omissions and contingencies.
6. The cost does not include cost of rights-of-way to install collection lines, transmission lines, and lift stations. It is assumed that those rights-of-way and / or parcels of land were donated. However, those parcels and rights-of-way do have value.

The reproduction cost approach includes the costs associated with overhead and engineering fees incurred throughout the course of the project. These costs are presented as a percentage of the total construction costs of the reproduced facilities and depreciated in the reproduction cost analysis.

### 3.2.1 Depreciation Analysis

Depreciation is defined basically as the loss of value on property from any cause. The usual causes include normal wear and tear through use, lack of maintenance, exposure to the elements and obsolescence. These causes and their effects are usually unique to each utility. Accrued depreciation used in the reproduction cost approach is the difference between the reproduction cost of new property and its estimated market value at the time of appraisal.

In this case, the full average service life (ASL) is used for depreciation. The depreciation method addresses how the value of the property is expensed over its life due to normal wear and tear assuming proper maintenance for the assets. The ASL is necessary to determine the time period over which the physical assets will be depreciated. The ASL is defined as the weighted average of the individual lives of a group of similar assets put into service at the same time. In general, the ASL represents the anticipated time period over which the property will provide useful service. Investment needs for the same function were classified separately as system deficiencies. Investment needs for the same function were classified separately as system deficiencies. Regulatory, functional and other external depreciation is reflected in the reconciled opinion of value.

#### 3.2.1.1 Typical Methods of Depreciation

There are three basic methods of determining depreciation:

1. Accelerated depreciation.
2. Straight-line depreciation.
3. Deferred depreciation.

Each method differs in how the rate of depreciation changes throughout the service life. The accelerated method depreciates an asset faster at the beginning of the service life; the straight-line method depreciates an asset evenly across its service life; and the deferred depreciation method depreciates an asset towards the end of its service life.

Accelerated methods for depreciation are generally used for tax purposes and are not generally available to utilities for accounting or rate-making purposes. The deferred depreciation method provides for depreciation rates slower than straight-line depreciation and has been used by a few regulatory agencies.

The straight-line depreciation method is generally required by the regulatory environment on utilities for book purposes. Straight-line depreciation applies a constant rate over the asset's life based on the formulas shown below:

$$\begin{aligned}\text{Depreciation \%} &= X/L \\ V_p &= B(1-X/L) \text{ or} \\ V_p &= V_s = B(0.05) \text{ whichever is greater}\end{aligned}$$

Where L is the service life (using the ASL or, where appropriate, an adjustment), B is the reproduction cost,  $V_p$  is the depreciated reproduction value, X is the age in years, and  $V_s$  is the salvage or residual value.

The straight-line depreciation method is the most widely used method among utilities and provides a uniform and straight forward system for depreciating assets over a given average service life. As such, straight-line depreciation is employed for the purpose of this Report. In addition, 5 percent of the reproduction cost has been used for the salvage or residual value of the fully depreciated assets. Even though the fixed physical assets may be difficult to salvage, there is a residual value remaining for these assets at the end of their service lives.

#### 3.2.1.2 Average Service Life Schedule

The sources utilized in the study is nationally published ASL schedules, and anticipated service lives from national wastewater treatment equipment manufacturers.

The appropriate ASL schedule for valuation of any utility should consider manufacturers' anticipated service lives, maintenance of facilities, and the utility system as determined by field inspections. Since field inspections were not included in the scope of this project an ASL was determined utilizing date of construction information taken from "As-Builts" and information provided by the staff of Palmetto Utilities. This information was utilized to obtain the ASL for the assets within the Study Area under normal service, including proper maintenance and repair. The resulting ASL's are shown in Table 3-1.

#### 3.2.2 Cost Determination

The use of construction costs in the determination of the estimated cost-new valuation is of primary significance. These construction costs are obtained from several sources. The following provides a listing of such sources in an approximate order of accuracy of the cost estimate:

1. Actual final construction costs for recent (present to 3 years old) projects utilizing the schedule of values.

2. Bid tabulations from recent projects utilizing bid forms with project details.
3. Bid tabulations from recent projects with lump sum bids.
4. Calls to contractors for estimates of equipment and installation costs complete.
5. Calls to contractors for estimates of labor/installation costs.
6. Calls to manufacturers for estimates of budget prices for equipment delivered to site installed.
7. Utilization of various construction cost estimation manuals such as Means Cost Data series or homographs from various technical reference sources (i.e., trade journals, texts, etc.).

The data obtained from these sources and others are then compiled to determine the best estimate of the current cost to replace the existing facilities.

### 3.3 SUMMARY

In an effort to formulate an opinion of value for the system, this Report will consider the reproduction cost less depreciation valuation approach. The resulting opinion of value is based upon the foregoing findings as well as professional experience.

Table 3-1  
 Reproduction Cost Approach  
 Average Service Lives

No.	Description	ASL (years)
<b>WASTEWATER:</b>		
	<b>Wastewater Services</b>	
1	VC	75
2	PVC	100
	<b>Gravity Collection</b>	
3	VC	75
4	PVC	100
5	Ductile Iron	100
6	Manholes	50
	<b>Lift Stations</b>	
7	Pumps-Controls, Rails and Covers	20
8	Structure	50
	<b>Wastewater Transmission Mains</b>	
9	PVC	100
10	DI	80

**SECTION FOUR**  
**REPRODUCTION COST LESS DEPRECIATION**

## 4.1 SUMMARY

**COLUMBIA PROJECT  
REPLACEMENT COST LESS DEPRECIATION  
COST SUMMARY**

**SEWERAGE COLLECTION AND TRANSMISSION LINES**

	<u>REPRODUCTION COST</u>	<u>COST LESS DEPRECIATION</u>
GRAVITY SEWER	\$44,156,202.00	\$38,538,209.00
FORCE MAIN	<u>\$ 460,574.00</u>	<u>\$ 405,305.00</u>
<b>SUB-TOTAL</b>	<b>\$44,616,776.00</b>	<b>\$38,943,514.00</b>
<b>LIFT STATIONS</b>		
	<u>REPRODUCTION COST</u>	<u>COST LESS DEPRECIATION</u>
LIFT STATIONS	\$ 2,874,800.00	\$ 1,581,140.00
<b>TOTAL</b>	<b>\$47,491,576.00</b>	<b>\$40,524,654.00</b>

## **SECTION FIVE**

### **SUMMARY**

## 5.0 EXECUTIVE SUMMARY

### 5.1 SUMMARY:

- A. Palmetto Utilities is a privately owned utility that has exclusive rights to provide wastewater services inside its defined service area.
- B. The City of Columbia owns operates and maintains a wastewater collection system within an area (Study Area) that Palmetto Utilities is considering acquiring.
- C. The purpose of this Report is to determine the value of a wastewater collection system within the Study Area as of October 30, 2007.
- D. There are several methods that can be used to determine the value of a utility system. The method used in this Report is the Reproduction Cost New Less Deprecation Method as modified by Joel E. Wood & Associates.
- E. The replacement cost of the facilities within the Study Area as of October 30, 2012 and as defined by this Report are as follows:

Collection and Transmission Lines	\$44,616,776.00
Lift Stations	<u>\$ 2,874,800.00</u>
TOTAL	\$47,491,576.00

- F. The "Replacement Cost New Less Depreciation" value of the wastewater facilities within the Study Area as of October 30, 2012 and as defined by this Report are as follows:

Collection and Transmission Lines	\$38,943,514.00
Lift Stations	<u>\$ 1,581,654.00</u>
TOTAL	\$40,524,654.00

- G. The cost to correct system deficiencies and correct functional and/or economic obsolescence over the next five years should be moderate. An annual assessment of the system should be conducted and a capital improvements plan should be developed to maintain the system in its current condition.
- H. We could find no indication of deferred maintenance that would warrant an adjustment to the Reproduction Cost New Less Depreciation value of the system as presented in this Report.
- I. As in all systems, there is a risk of failure for the used mechanical equipment, piping, and / or structure items that comprise the Study Area

Wastewater Collection System. We are of the opinion that there should be no adjustment to the Reproduction Cost New Less Depreciation as presented in this Report for system deficiencies other than those accounted for in deductions for "Depreciation" as shown in the calculations of Reproduction Cost New Less Depreciation shown in Section 4.2, 4.3 and 4.4 of this Report.

- J. For this Report, the moveable fixtures, equipment, rolling stock, and inventory associated with the Study Area were not evaluated. The final value placed on the infrastructure within the Study Area should include an audited value of the fixtures, equipment, rolling stock, and inventory associated with the operation and maintenance of the infrastructure within the Study Area.
- K. Elements of the "Going Concern" value of a business should include, but is not limited to, the establishment of customers, growth potential of the area served by the utility, and the efficiency of the work force. A "Going Concern" adjustment was not added to the "Reproduction Cost New Less Depreciation" as defined by this report. "Going Concern" values typically range between five (5%) and ten (10%) of the reproduction cost new less depreciation of a utility system.

## APPENDIX

**A. GRAVITY SEWER LINE AND FORCE MAIN  
REPRODUCTION COST**

As Built No.	PROJECT NAME	DESCRIPTION	QTY.	UNITS	UNIT COST	COST
211-02	ASHLEY HALL PHASE 1 THRU 5					
211-02B		8" PVC GRAVITY SEWER	7,855	L. F.	\$30.00	\$235,650.00
211-02C		MANHOLES	45	EA.	\$2,783.00	\$125,235.00
211-02A						
240-05	ASHLEY PLACE PHASE 1 THRU 3					
240-05A		8" PVC GRAVITY SEWER	2,117	L. F.	\$30.00	\$63,510.00
		8" DIP GRAVITY SEWER	147	L. F.	\$39.00	\$5,733.00
		MANHOLES	11	EA.	\$2,783.00	\$30,613.00
248-07	ASHLEY RIDGE PHASE 1					
		8" PVC GRAVITY SEWER	5,302	L.F.	\$30.00	\$159,060.00
		8" DIP GRAVITY SEWER	20	L.F.	\$39.00	\$780.00
		MANHOLES	30	EA.	\$2,783.00	\$83,490.00
167-29	BARTON CREEK OUTFALL					
167-25A		8" PVC GRAVITY SEWER	200	L. F.	\$30.00	\$6,000.00
		15" PVC GRAVITY SEWER	2,689	L. F.	\$42.00	\$112,938.00
		15" DIP GRAVITY SEWER	137	L. F.	\$55.00	\$7,535.00
		18" PVC GRAVITY SEWER	717	L. F.	\$51.00	\$36,567.00
		MANHOLES	14	EA.	\$2,783.00	\$38,962.00
138-08B	BRADFORD PARK					
130-08R		6" PVC FORCE MAIN	4,716	L. F.	\$10.00	\$47,160.00
		8" PVC GRAVITY SEWER	3,729	L.F.	\$30.00	\$111,870.00
		8" DIP GRAVITY SEWER	18	L.F.	\$39.00	\$702.00
		MANHOLES	13	EA.	\$2,783.00	\$36,179.00

As Built No.	PROJECT NAME	DESCRIPTION	QTY.	UNITS	UNIT COST	COST
233-10	BRANDON HALL					
		8" PVC GRAVITY SEWER	1,000	L.F.	\$30.00	\$30,000.00
		8" DIP GRAVITY SEWER	302	L.F.	\$39.00	\$11,778.00
		MANHOLES	2	EA.	\$2,783.00	\$5,566.00
290-10	BRICKSIDE VILLAGE					
		8" PVC GRAVITY SEWER	1,743	L.F.	\$30.00	\$52,290.00
		MANHOLES	10	EA.	\$2,783.00	\$27,830.00
195-16	BRICKYARD VILLAGE					
		8" PVC GRAVITY SEWER	2,647	L.F.	\$30.00	\$79,410.00
		8" DIP GRAVITY SEWER	923	L.F.	\$39.00	\$35,997.00
		MANHOLES	16	EA.	\$2,783.00	\$44,528.00
157-14	BROOKFIELD					
		8" PVC GRAVITY SEWER	4,128	L.F.	\$30.00	\$123,840.00
		MANHOLES	23	EA.	\$2,783.00	\$64,009.00
276-02	BROOKHAVEN					
276-02A		4" PVC FORCE MAIN	130	L. F.	\$8.00	\$1,040.00
276-02B		6" PVC FORCE MAIN	334	L. F.	\$10.00	\$3,340.00
276-02C		8" PVC GRAVITY SEWER	31,702	L. F.	\$30.00	\$951,060.00
276-07D		8" DIP GRAVITY SEWER	2,188	L. F.	\$39.00	\$85,332.00
276-07F		10" PVC GRAVITY SEWER	103	L. F.	\$32.00	\$3,296.00
276-02G		12" PVC GRAVITY SEWER	2,405	L. F.	\$35.00	\$84,175.00
276-02H		12" DIP GRAVITY SEWER	827	L. F.	\$49.00	\$40,523.00
276-02I		MANHOLES	191	EA.	\$2,783.00	\$531,553.00
276-02J						
276-02K						
276-02L						

As Built No.	PROJECT NAME	DESCRIPTION	QTY.	UNITS	UNIT COST	COST
213-65A	BROOKSTONE and RICE CREEK					
213-05B		8" PVC GRAVITY SEWER	12,190	L. F.	\$30.00	\$365,700.00
		MANHOLES	60	EA.	\$2,783.00	\$166,980.00
227-21A	CAMBRIDGE OAKS					
227-21		8" PVC GRAVITY SEWER	4,908	L.F.	\$30.00	\$147,240.00
		MANHOLES	28	EA.	\$2,783.00	\$77,924.00
270-06	CANE BREAK SUBDIVISION					
		8" PVC GRAVITY SEWER	3,271	L.F.	\$30.00	\$98,130.00
		MANHOLES	20	EA.	\$2,783.00	\$55,660.00
44-4A	CANDLEWOOD					
126-15		8" PVC GRAVITY SEWER	10,102	L.F.	\$30.00	\$303,060.00
44-4B		MANHOLES	115	EA.	\$2,783.00	\$320,045.00
128-01						
133-01A						
127-07						
133-01C						
133-01						
202-25B	CARRIAGE OAKS PHASE					
202-25		8" PVC GRAVITY SEWER	15,034	L.F.	\$30.00	\$451,020.00
202-25A		8" DIP GRAVITY SEWER	115	L.F.	\$39.00	\$4,485.00
		MANHOLES	73	EA.	\$2,783.00	\$203,159.00

As Built No.	PROJECT NAME	DESCRIPTION	QTY.	UNITS	UNIT COST	COST
36-278	CLEAR SPRINGS					
36-22A		8" PVC GRAVITY SEWER	7,870	L. F.	\$30.00	\$236,100.00
100-20(R-5)		8" VCP GRAVITY SEWER	650	L. F.	\$32.00	\$20,800.00
		10" PVC GRAVITY SEWER	1,435	L. F.	\$32.00	\$45,920.00
		MANHOLES	54	EA.	\$2,783.00	\$150,282.00
209-1R	CLEMSON ROAD					
228-13		8" PVC GRAVITY SEWER	4,430	L.F.	\$30.00	\$132,900.00
295-16		8" DIP GRAVITY SEWER	45	L.F.	\$39.00	\$1,755.00
266-18B		MANHOLES	34	EA.	\$2,783.00	\$94,622.00
174-03						
179-12E	CLUB COLONY PHASE II					
		8" PVC GRAVITY SEWER	1,614	L. F.	\$30.00	\$48,420.00
		MANHOLES	8	EA.	\$2,783.00	\$22,264.00
215-12	COTTONWOOD					
		8" PVC GRAVITY SEWER	4,133	L. F.	\$30.00	\$123,990.00
		8" DIP GRAVITY SEWER	72	L. F.	\$39.00	\$2,808.00
		MANHOLES	21	EA.	\$2,783.00	\$58,443.00
184-08	COURT LAND					
		8" PVC GRAVITY SEWER	61	L. F.	\$30.00	\$1,830.00
		8" DIP GRAVITY SEWER	54	L. F.	\$39.00	\$2,106.00
		MANHOLES	1	EA.	\$2,783.00	\$2,783.00
60-31	CRANE CREEK INTERCEPTOR					
		15" PVC GRAVITY SEWER	4,722	L. F.	\$42.00	\$198,324.00
		27" PVC GRAVITY SEWER	65,831	L. F.	\$79.00	\$5,200,649.00
		MANHOLES	72	EA.	\$2,783.00	\$200,376.00

As Built No.	PROJECT NAME	DESCRIPTION	QTY.	UNITS	UNIT COST	COST
145-16	CRESCENT LAKE SECTION 1 & 2					
145-16F		10" PVC GRAVITY SEWER	995	L. F.	\$32.00	\$31,840.00
		8" PVC GRAVITY SEWER	12,896	L. F.	\$30.00	\$386,880.00
		8" DIP GRAVITY SEWER	211	L. F.	\$39.00	\$8,229.00
		MANHOLES	71	EA.	\$2,783.00	\$197,593.00
192-22	CRICKENTREE CORNERS					
		8" PVC GRAVITY SEWER	775	L. F.	\$30.00	\$23,250.00
		MANHOLES	5	EA.	\$2,783.00	\$13,915.00
236-12	CVS/PHARMACY STORE #2269					
		8" PVC GRAVITY SEWER	301	L.F.	\$30.00	\$9,030.00
		MANHOLES	3	EA.	\$2,783.00	\$8,349.00
281-22A	DEER CREEK PHASE II					
		8" PVC GRAVITY SEWER	9,316	L. F.	\$30.00	\$279,480.00
		8" DIP GRAVITY SEWER	448	L. F.	\$39.00	\$17,472.00
		MANHOLES	60	EA.	\$2,783.00	\$166,980.00
231-03	DEVON GREEN SUBDIVISON I,II,III					
		8" PVC GRAVITY SEWER	3,780	L. F.	\$30.00	\$113,400.00
		MANHOLES	21	RA.	\$2,783.00	\$58,443.00
199-12	DIAMANT BOART AMERICA					
		8" PVC GRAVITY SEWER	4,192	L. F.	\$30.00	\$125,760.00
		8" DIP GRAVITY SEWER	80	L. F.	\$39.00	\$3,120.00
		MANHOLES	19	RA.	\$2,783.00	\$52,877.00

As Built No.	PROJECT NAME	DESCRIPTION	QTY.	UNITS	UNIT COST	COST
CF311-11	DMT SEWER					
		8" PVC GRAVITY SEWER	927	L. F.	\$30.00	\$27,810.00
		MANHOLES	3	EA.	\$2,783.00	\$8,349.00
222-09	DOVE PARK PHASE					
222-09D		8" PVC GRAVITY SEWER	7,217	L. F.	\$30.00	\$216,510.00
222-09C		MANHOLES	38	EA.	\$2,783.00	\$105,754.00
222-09B						
235-16C	EAGLE GLEN PHASE IV					
		8" PVC GRAVITY SEWER	2,236	L. F.	\$30.00	\$67,080.00
		8" DIP GRAVITY	1,108	L. F.	\$39.00	\$43,212.00
		MANHOLES	16	EA.	\$2,783.00	\$44,528.00
		2-1/2" PVC FORCE MAIN	1,122	L. F.	\$5.00	\$5,610.00
262-23	ELDERS POND SUBDIVISION					
		8" PVC GRAVITY SEWER	5,883	L. F.	\$30.00	\$176,490.00
		MANHOLES	34	EA.	\$2,783.00	\$94,622.00
255-12E	FALLS MILL PHASE II					
		8" PVC GRAVITY SEWER	4,648	L.F.	\$30.00	\$139,440.00
		MANHOLES	27	EA.	\$2,783.00	\$75,141.00
258-07	FIRST CAROLINA BAPTIST					
		8" PVC GRAVITY SEWER	394	L.F.	\$30.00	\$11,820.00
		8" DIP GRAVITY	127	L.F.	\$39.00	\$4,953.00
		MANHOLES	2	EA.	\$2,783.00	\$5,566.00

As Built No.	PROJECT NAME	DESCRIPTION	QTY.	UNITS	UNIT COST	COST
141-18A	FISHER WOOD PHASE					
141-18		8" PVC GRAVITY SEWER	10,813	L. F.	\$30.00	\$324,390.00
		8" DIP GRAVITY SEWER	72	L. F.	\$39.00	\$2,808.00
		MANHOLES	66	EA.	\$2,783.00	\$183,678.00
276-07A	FORUM 2					
		8" PVC GRAVITY SEWER	351	L. F.	\$30.00	\$10,530.00
		8" DIP GRAVITY SEWER	176	L.F.	\$39.00	\$6,864.00
		MANHOLES	2	EA.	\$2,783.00	\$5,566.00
RC 145-16C	FOX MEADOW PHASE II					
		8" PVC GRAVITY SEWER	4,273	L.F.	\$30.00	\$128,190.00
		MANHOLES	18	EA.	\$2,783.00	\$50,094.00
175-02J	GLENN MEADOWS VILLAGE					
		8" PVC GRAVITY SEWER	4,787	L.F.	\$30.00	\$143,610.00
		MANHOLES	21	EA.	\$2,783.00	\$58,443.00
239-19	GOOD YEAR TIRE					
		8" PVC GRAVITY SEWER	2,994	L. F.	\$30.00	\$89,820.00
		MANHOLES	1	EA.	\$2,783.00	\$2,783.00
136-08	GREEN SPRINGS					
43-208		8" PVC GRAVITY SEWER	7,905	L. F.	\$30.00	\$237,150.00
		MANHOLES	51	EA.	\$2,783.00	\$141,933.00
306-25	GREEN VALLEY					
		8" PVC GRAVITY SEWER	1,237	L. F.	\$30.00	\$37,110.00
		MANHOLES	9	EA.	\$2,783.00	\$25,047.00

As Built No.	PROJECT NAME	DESCRIPTION	QTY.	UNITS	UNIT COST	COST
255-23	HARDSCRABLE ROAD					
		8" PVC GRAVITY SEWER	286	L. F.	\$30.00	\$8,580.00
		MANHOLES	1	EA.	\$2,783.00	\$2,783.00
244-10	HARRINGTON COURT					
		8" PVC GRAVITY SEWER	3,266	L. F.	\$30.00	\$97,980.00
		MANHOLES	15	EA.	\$2,783.00	\$41,745.00
255-12N	HEATHER GREEN					
255-12K		8" PVC GRAVITY SEWER	12,151	L. F.	\$30.00	\$364,530.00
		MANHOLES	65	EA.	\$2,783.00	\$180,895.00
288-02	HERITAGE FOREST PHASE II,III,IV					
		8" PVC GRAVITY SEWER	4,936	L. F.	\$30.00	\$148,080.00
		12" DIP FORCE MAIN	1,110	L. F.	\$36.00	\$39,960.00
		MANHOLES	29	EA.	\$2,783.00	\$80,707.00
278-01	HESTER WOOD & KILLIAN STATION					
		8" PVC GRAVITY SEWER	5,852	L. F.	\$30.00	\$175,560.00
		MANHOLES	39	EA.	\$2,783.00	\$108,537.00
222-03	HIGHLANDS FORCE MAIN RELOCATE					
		12" DIP FORCE MAIN	1,110	L. F.	\$36.00	\$39,960.00
287-06	HOBART					
		8" PVC GRAVITY SEWER	805	L.F.	\$30.00	\$24,150.00
		MANHOLES	3	EA.	\$2,783.00	\$8,349.00

As Built No.	PROJECT NAME	DESCRIPTION	QTY.	UNITS	UNIT COST	COST
208-14C	HOLLY RIDGE PHASE I,II,III					
20814-B		8" PVC GRAVITY SEWER	4,437	L.F.	\$30.00	\$133,110.00
		8" DIP GRAVITY SEWER	54	L.F.	\$39.00	\$2,106.00
		4" PVC FORVE MAIN	425	L.F.	\$8.00	\$3,400.00
		MANHOLES	27	EA.	\$2,783.00	\$75,141.00
280-11	HOMESTEAD					
		8" PVC GRAVITY SEWER	3,480	L. F.	\$30.00	\$104,400.00
		8" DIP GRAVITY SEWER	1,643	L. F.	\$39.00	\$64,077.00
		MANHOLES	30	EA.	\$2,783.00	\$83,490.00
271-18	IVY SQUARE					
		8" PVC GRAVITY SEWER	3,499	L.F.	\$30.00	\$104,970.00
		10" PVC GRAVITY SEWER	490	L.F.	\$32.00	\$15,680.00
		12" PVC GRAVITY SEWER	336	L.F.	\$35.00	\$11,760.00
		18" PVC GRAVITY SEWER	1,678	L.F.	\$51.00	\$85,578.00
		18" DIP GRAVITY	60	L.F.	\$66.00	\$3,960.00
		MANHOLES	29	EA.	\$2,783.00	\$80,707.00
276-18	KILLIAN ROAD					
		8" PVC GRAVITY SEWER	1,920	L. F.	\$30.00	\$57,600.00
		MANHOLES	10	EA.	\$2,783.00	\$27,830.00
270-03	KILLIAN GREEN					
		8" PVC GRAVITY SEWER	6,795	L. F.	\$30.00	\$203,850.00
		MANHOLES	34	EA.	\$2,783.00	\$94,622.00

As Built No.	PROJECT NAME	DESCRIPTION	QTY.	UNITS	UNIT COST	COST
154-07	KITCHENAID					
		8" PVC GRAVITY SEWER	3,446	L. F.	\$30.00	\$103,380.00
		8" DIP GRAVITY SEWER	1,600	L.F.	\$39.00	\$62,400.00
		15" PVC GRAVITY SEWER	4,082	L. F.	\$42.00	\$171,444.00
		15" DIP GRAVITY SEWER	36	L. F.	\$55.00	\$1,980.00
		MANHOLES	38	EA.	\$2,783.00	\$105,754.00
219-164R	LANDON PLACE					
292-16		8" PVC GRAVITY SEWER	4,498	L. F.	\$30.00	\$134,940.00
		MANHOLES	23	EA.	\$2,783.00	\$64,009.00
145-16	LONG CREEK SUBDIVISION					
145-16A		8" PVC GRAVITY SEWER	25,013	L. F.	\$30.00	\$750,390.00
145-16B		8" DIP GRAVITY SEWER	626	L. F.	\$39.00	\$24,414.00
124-21(R-1)		8" VCP GRAVITY SEWER	11,130	L. F.	\$32.00	\$356,160.00
122-09(R-1)		10" VCP GRAVITY SEWER	682	L. F.	\$34.00	\$23,188.00
87-17		MANHOLES	117	EA.	\$2,783.00	\$325,611.00
255-12	LONGTOWN OUTFALL					
255-12A		8"PVC GRAVITY SEWER	6,671	L. F.	\$30.00	\$200,130.00
255-12L		6" PVC FORCE MAIN	2,639	L.F.	\$10.00	\$26,390.00
255-12J		10" PVC GRAVITY SEWER	2,270	L. F.	\$32.00	\$72,640.00
290-01		10" DIP GRAVITY SEWER	1,103	L. F.	\$42.00	\$46,326.00
87-01		8" DIP GRAVITY SEWER	18	L. F.	\$39.00	\$702.00
288-18		12" PVC FORCE MAIN	2,639	L.F.	\$22.00	\$58,058.00
		12" DIP GRAVITY SEWER	390	L. F.	\$49.00	\$19,110.00
		18" PVC GRAVITY SEWER	6,265	L. F.	\$51.00	\$319,515.00
		18" DIP GRAVITY SEWER	198	L. F.	\$66.00	\$13,068.00
		MANHOLES	60	EA.	\$2,783.00	\$166,980.00

As Built No.	PROJECT NAME	DESCRIPTION	QTY.	UNITS	UNIT COST	COST
151-17	LOST TREE					
		8" PVC GRAVITY SEWER	3,510	L. F.	\$30.00	\$105,300.00
		8" DIP GRAVITY SEWER	163	L. F.	\$39.00	\$6,357.00
		MANHOLES	28	EA.	\$2,783.00	\$77,924.00
						\$0.00
266-18	LOVETT OUTFALL					\$0.00
266-18A		8" PVC GRAVITY SEWER	4,037	L. F.	\$30.00	\$121,110.00
		8" DIP GRAVITY SEWER	162	L. F.	\$39.00	\$6,318.00
		MANHOLES	19	EA.	\$2,783.00	\$52,877.00
209-14A	MAGNOLIA HALL					
209-14B		8" PVC GRAVITY SEWER	10,295	L. F.	\$30.00	\$308,850.00
		8" DIP GRAVITY SEWER	624	L. F.	\$39.00	\$24,336.00
		MANHOLES	58	EA.	\$2,783.00	\$161,414.00
229-2003	MAGNOLIA POINT					
		8" PVC GRAVITY SEWER	1,251	L. F.	\$30.00	\$37,530.00
		MANHOLES	4	EA.	\$2,783.00	\$11,132.00
242-17A	MAYWOOD PHASE II					
		8" PVC GRAVITY SEWER	6,240	L.F.	\$30.00	\$187,200.00
		8" DIP GRAVITY	18	L.F.	\$39.00	\$702.00
		MANHOLES	38	EA.	\$2,783.00	\$105,754.00
291-08	MERIDIAN AT HERON LAKE					
		8" PVC GRAVITY SEWER	2,443	L. F.	\$30.00	\$73,290.00
		MANHOLES	12	EA.	\$2,783.00	\$33,396.00

As Built No.	PROJECT NAME	DESCRIPTION	QTY.	UNITS	UNIT COST	COST
156-15	MILL BANK					
		8" PVC GRAVITY SEWER	2,926	L. F.	\$30.00	\$87,780.00
		MANHOLES	17	EA.	\$2,783.00	\$47,311.00
128-19	NORTH CROSS					
		8" PVC GRAVITY SEWER	10,810	L. F.	\$30.00	\$324,300.00
		MANHOLES	43	EA.	\$2,783.00	\$119,669.00
138-20	NORTH SPRINGS SUBDIVISION					
138-01A		8" GRAVITY SEWER	20,857	L. F.	\$30.00	\$625,710.00
123-4		MANHOLES	87	EA.	\$2,783.00	\$242,121.00
39-05A						
138-01						
40-31						
39-5						
189-16	NORTH TRACE					
189-16A		8" PVC GRAVITY SEWER	1,912	L. F.	\$30.00	\$57,360.00
		MANHOLES	11	EA.	\$2,783.00	\$30,613.00
213-08	PARSON'S MILL					
213-06		8" PVC GRAVITY SEWER	752	L. F.	\$30.00	\$22,560.00
		MANHOLES	5	EA.	\$2,783.00	\$13,915.00
222-02	PICKWICK PLACE					
		8" PVC GRAVITY SEWER	2,043	L. F.	\$30.00	\$61,290.00
		8" DIP GRAVITY SEWER	257	L. F.	\$39.00	\$10,023.00
		MANHOLES	11	EA.	\$2,783.00	\$30,613.00
200-37	PINEFOREST COURT					
		8" PVC GRAVITY SEWER	576	L. F.	\$30.00	\$17,280.00
		MANHOLES	4	EA.	\$2,783.00	\$11,132.00

As Built No.	PROJECT NAME	DESCRIPTION	QTY.	UNITS	UNIT COST	COST
208-08	PLANTATION PARK PHASE 1 8C II					
245-07A		8" PVC GRAVITY SEWER	7,739	L.F.	\$30.00	\$232,170.00
245-07		8" DIP GRAVITY	487	L.F.	\$39.00	\$18,993.00
		MANHOLES	41	EA.	\$2,783.00	\$114,103.00
107-22R	RAINSBOROUGH					
107-22A		8" PVC GRAVITY SEWER	3,110	L.F.	\$30.00	\$93,300.00
		8" DIP GRAVITY SEWER	40	L. F.	\$39.00	\$1,560.00
		MANHOLES	22	EA.	\$2,783.00	\$61,226.00
243-14A	REMINGTON RIDGE					
243-14		8" PVC GRAVITY SEWER	3,206	L. F.	\$30.00	\$96,180.00
		8" DIP GRAVITY SEWER	100	L. F.	\$39.00	\$3,900.00
		MANHOLES	19	EA.	\$2,783.00	\$52,877.00
109-16R2	RICHLAND NORTH EAST INDUSTRIAL					
		8" VCP GRAVITY SEWER	5,207	L. F.	\$32.00	\$166,624.00
		12" VCP GRAVITY SEWER	7,342	L. F.	\$37.00	\$271,654.00
		12 DIP FORCE MAIN	6,546	L. F.	\$36.00	\$235,656.00
		15" VCP GRAVITY SEWER	1,762	L. F.	\$45.00	\$79,290.00
		MANHOLES	57	EA.	\$2,783.00	\$158,631.00
309-23A	RICHLAND SCHOOLS					
175-05		8" PVC GRAVITY SEWER	4,624	L. F.	\$30.00	\$138,720.00
285-08CR-D		8" DIP GRAVITY SEWER	100	L. F.	\$39.00	\$3,900.00
234-21		10" PVC GRAVITY SEWER	483	L.F.	\$32.00	\$15,456.00
		MANHOLES	22	EA.	\$2,783.00	\$61,226.00

As Built No.	PROJECT NAME	DESCRIPTION	QTY.	UNITS	UNIT COST	COST
255-120	RIVERDALE PHASE I					
		8" PVC GRAVITY SEWER	2,928	L.F.	\$30.00	\$87,840.00
		MANHOLES	12	EA.	\$2,783.00	\$33,396.00
300-12	RIVERS STATION					
		8" PVC GRAVITY SEWER	4,749	L.F.	\$30.00	\$142,470.00
		MANHOLES	30	EA.	\$2,783.00	\$83,490.00
60=31A	ROSE CREEK SUBDIVISION					
142-07B		8" PVC GRAVITY SEWER	16,381	L. F.	\$30.00	\$491,430.00
142-07		8" DIP GRAVITY SEWER	449	L. F.	\$39.00	\$17,511.00
213-05		12" DIP GRAVITY SEWER	8,786	L. F.	\$49.00	\$430,514.00
		24"VCP GRAVITY SEWER	7,546	L. F.	\$70.00	\$528,220.00
		MANHOLES	108	EA.	\$2,783.00	\$300,564.00
290-01B	SAMS CROSSING					
290-01B		8" PVC GRAVITY SEWER	2,426	L. F.	\$30.00	\$72,780.00
		MANHOLES	13	EA.	\$2,783.00	\$36,179.00
175-027	SOUTHWOOD PHASE 3 8C 4					
		8" PVC GRAVITY SEWER	4,512	L.F.	\$30.00	\$135,360.00
		MANHOLES	34	EA.	\$2,783.00	\$94,622.00
199-01(R-1)	SPARKLE BERRY LANE					
211-07						
		8" PVC GRAVITY SEWER	1,116	L. F.	\$30.00	\$33,480.00
		8" DIP GRAVITY SEWER	18	L. F.	\$39.00	\$702.00
		MANHOLES	6	EA.	\$2,783.00	\$16,698.00

As Built No.	PROJECT NAME	DESCRIPTION	QTY.	UNITS	UNIT COST	COST
145-17	SPRINGHURST					
		8" PVC GRAVITY SEWER	4,755	L. F.	\$30.00	\$142,650.00
		MANHOLES	21	EA.	\$2,783.00	\$58,443.00
60-31C	SPRING VALLEY SUBDIVISION					
18-16B		8" PVC GRAVITY SEWER	8,127	L. F.	\$30.00	\$243,810.00
54-21I		8" VC GRAVITY SEWER	14,104	L. F.	\$32.00	\$451,328.00
102-03 (R-2)		10" VC GRAVITY SEWER	4,241	L. F.	\$34.00	\$144,194.00
118-16A		12" VC GRAVITY SEWER	4,181	L. F.	\$37.00	\$154,697.00
54-21K4(R-1)		15" VC GRAVITY SEWER	457	L. F.	\$45.00	\$20,565.00
		12" DIP GRAVITY SEWER	38	L. F.	\$49.00	\$1,862.00
		MANHOLES	189	EA.	\$2,783.00	\$525,987.00
175-02V	SUMMIT CENTER					
		8" PVC GRAVITY SEWER	614	L. F.	\$30.00	\$18,420.00
		12" PVC GRAVITY SEWER	881	L. F.	\$35.00	\$30,835.00
		12" DIP GRAVITY SEWER	371	L. F.	\$49.00	\$18,179.00
		MANHOLES	9	EA.	\$2,783.00	\$25,047.00
253-02	TARGET					
		8" PVC GRAVITY SEWER	2,917	L. F.	\$30.00	\$87,510.00
		MANHOLES	14	EA.	\$2,783.00	\$38,962.00
263-16	THE GREENS					
		8" PVC GRAVITY SEWER	2,788	L. F.	\$30.00	\$83,640.00
		MANHOLES	24	EA.	\$2,783.00	\$66,792.00
193-20B	THE LAKES PHASE I, II					
193-20D		8" PVC GRAVITY SEWER	10,396	L.F.	\$30.00	\$311,880.00
		MANHOLES	43	EA.	\$2,783.00	\$119,669.00

As Built No.	PROJECT NAME	DESCRIPTION	QTY.	UNITS	UNIT COST	COST
271-25	THE SHORES AT ELDER'S POND					
		8" PVC GRAVITY SEWER	2,398	L. F.	\$30.00	\$71,940.00
		MANHOLES	18	EA.	\$2,783.00	\$50,094.00
255-12C	THE VILLAGE AT LONGTOWN					
		8" PVC GRAVITY SEWER	3,668	L.F.	\$30.00	\$110,040.00
		10" PVC GRAVITY SEWER	3,258	L.F.	\$32.00	\$104,256.00
		8" DIP GRAVITY	300	L.F.	\$39.00	\$11,700.00
		10" DIP GRAVITY	194	L.F.	\$42.00	\$8,148.00
		MANHOLES	43	EA.	\$2,783.00	\$119,669.00
163-21	TIMBERVALE					
163-21(R-1)		8" PVC GRAVITY SEWER	5,156	L. F.	\$30.00	\$154,680.00
163-21A		8" DIP GRAVITY SEWER	125	L. F.	\$39.00	\$4,875.00
		MANHOLES	28	EA.	\$2,783.00	\$77,924.00
255-12G	THOMASTON					
		8" PVC GRAVITY SEWER	1,170	L.F.	\$30.00	\$35,100.00
		MANHOLES	8	EA.	\$2,783.00	\$22,264.00
255-12M	TRADITIONS PHASE I, II					
255-12-2		8" PVC GRAVITY SEWER	3,730	L.F.	\$30.00	\$111,900.00
		10" PVC GRAVITY SEWER	1,767	L.F.	\$32.00	\$56,544.00
		MANHOLES	30	EA.	\$2,783.00	\$83,490.00
276-10	VILLAGE AT LAKE SHORE					
276-10A		8" PVC GRAVITY SEWER	7,035	L. F.	\$30.00	\$211,050.00
		8" DIP GRAVITY SEWER	306	L. F.	\$39.00	\$11,934.00
		MANHOLES	50	EA.	\$2,783.00	\$139,150.00

As Built No.	PROJECT NAME	DESCRIPTION	QTY.	UNITS	UNIT COST	COST
255-12F	VINEYARDS CROSSING PHASE I 8C 2					
		8" PVC GRAVITY SEWER	4,321	L.F.	\$30.00	\$129,630.00
		MANHOLES	16	EA.	\$2,783.00	\$44,528.00
242-23A	WAVERLY PLACE PHASE II					
242-23D		8" PVC GRAVITY SEWER	5,988	L.F.	\$30.00	\$179,640.00
242-23		MANHOLES	36	EA.	\$2,783.00	\$100,188.00
209-19	WELLINGTON SUBDIVISION PHASE 1					
		8"PVC GRAVITY SEWER	6,072	L. F.	\$30.00	\$182,160.00
		MANHOLES	35	EA.	\$2,783.00	\$97,405.00
228-20	WESTWOOD LAKES					
		8" PVC GRAVITY SEWER	2,295	L.F.	\$30.00	\$68,850.00
		MANHOLES	14	EA.	\$2,783.00	\$38,962.00
169-15	WHITEHURST PHASE I, II, IIB					
169-15A		8"PVC GRAVITY SEWER	4,804	L. F.	\$30.00	\$144,120.00
169-15B		8" DIP GRAVITY SEWER	126	L. F.	\$39.00	\$4,914.00
		MANHOLES	22	EA.	\$2,783.00	\$61,226.00
206-15	WILD AZELEA COURT					
		8"PVC GRAVITY SEWER	945	L. F.	\$30.00	\$28,350.00
		MANHOLES	3	EA.	\$2,783.00	\$8,349.00

As Built No.	PROJECT NAME	DESCRIPTION	QTY.	UNITS	UNIT COST	COST
193-20E	WILLOW LAKES PHASE VI - A					
193-20F		8" PVC GRAVITY SEWER	11,934	L. F.	\$30.00	\$358,020.00
193-20G		8" DIP GRAVITY	320	L. F.	\$39.00	\$12,480.00
19320H		10" PVC GRAVITY SEWER	1,747	L. F.	\$32.00	\$55,904.00
193-20A		10" DIP GRAVITY SEWER	54	L. F.	\$42.00	\$2,268.00
		12" PVC GRAVITY SEWER	3,395	L. F.	\$35.00	\$118,825.00
		12" DIP GRAVITY SEWER	89	L. F.	\$49.00	\$4,361.00
		MANHOLES	137	EA.	\$2,783.00	\$381,271.00
212-18(R-1)	WINCHESTER SUBDIVISION					
212-18A		8"PVC GRAVITY SEWER	27,030	L. F.	\$30.00	\$810,900.00
212-18		8"DIP GRAVITY SEWER	1,901	L. F.	\$39.00	\$74,139.00
212-18C		15" PVC GRAVITY SEWER	2,059	L. F.	\$42.00	\$86,478.00
		MANHOLES	171	EA.	\$2,783.00	\$475,893.00
179-12C	WINDERMERE PHASE					
179-12		8" PVC GRAVITY SEWER	8,457	L.F.	\$30.00	\$253,710.00
179-12B		8" DIP GRAVITY	300	L.F.	\$39.00	\$11,700.00
179-12G		MANHOLES	37	EA.	\$2,783.00	\$102,971.00
63-25B	WINDMILL ORCHARD					
		8"PVC GRAVITY SEWER	1,945	L. F.	\$30.00	\$58,350.00
		MANHOLES	8	EA.	\$2,783.00	\$22,264.00

As Built No.	PROJECT NAME	DESCRIPTION	QTY.	UNITS	UNIT COST	COST
169-06	WINSLOW SUBDIVISION					
169-06A-F		8" PVC GRAVITY SEWER	33,381	L. F.	\$30.00	\$1,001,430.00
169-06B		8" DIP GRAVITY SEWER	1,095	L.F.	\$39.00	\$42,705.00
169-06E		15" PVC GRAVITY SEWER	1,615	L. F.	\$42.00	\$67,830.00
169-06G		15" DIP GRAVITY SEWER	75	L. F.	\$55.00	\$4,125.00
169-06-J		MANHOLES	182	EA.	\$2,783.00	\$506,506.00
169-06M						
169-06N						
169-06O						
	MISCELLANEOUS NO AS-BUILTS	8" PVC GRAVITY SEWER	56,890	L. F.	\$30.00	\$1,706,700.00
	BLOCKS (1078,1080,0832,0834,0836, 0618,0620,0622,0438,0440)	MANHOLES	272	EA.	\$2,783.00	\$756,976.00
	SERVICE CONNECTIONS	4" SERVICE LATTERAL	11,000	EA.	\$350.00	\$3,850,000.00
		TOTAL				\$44,616,776.00

**B. GRAVITY SEWER LINE AND FORCE MAIN  
ANALYSIS**

TOTAL WASTEWATER COLLECTION AND FORCE MAIN

**C. LIFT STATION REPRODUCTION COST AND ANALYSIS**

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## **D. STUDY AREA MAP**